

Amendments to Drawings

The attached sheet includes amendments to Fig. 1 and replaces the original sheet of Fig.

1. The amendments to Fig. 1 are for clarification purposes only and do not introduce new subject matter. Accordingly, it is respectfully requested that the amendments to Fig. 1 be accepted by the Examiner.

Attachment: Replacement Sheet, Fig. 1

REMARKS

The present response amends the specification and the drawing. Claims 1-8 are canceled and new claims 9-16 presented herein. Claims 9-16 are pending in the captioned case. Further examination and reconsideration of the presently claimed application are respectfully requested.

Section 112, First Paragraph, Rejection

Claims 1-8 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully disagree as set forth below.

With regard to claim 1, the Office Action alleges that the specification does not disclose or teach the corresponding structures of materials to enable one skilled to make and/or use the invention. In response thereto, Applicants wish to note that the specification does not need to disclose or teach. Instead, the specification “preferably omits what is well known in the art.” *In Re Buchner*, 929 F.2d 660, 661 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367 (Fed. Cir. 1986). Thus, instead of the standard being to disclose or teach corresponding structures or materials, the standard test for enablement is whether one skilled in the art could make or use the invention from that which is disclosed without undue experimentation. MPEP 2164.01; *United States v. Teletronics, Inc.*, 857 F.2d 778 (Fed. Cir. 1988). The only purpose of the specification is for direction and guidance to a skilled artisan. MPEP 2164.01(a); *In Re Wands*, 858 F.2d 731 (Fed. Cir. 1988). If the level of one of ordinary skill is quite high and the level of predictability in the art is also high, the amount of experimentation needed to make or use the invention might be quite low, even if the specification provides minimal direction and guidance. *See* factors under MPEP 2164.01(a).

In particular, the Office Action asserts that claim 1 recites . . . “the controller signaling, by means of a desired value, a predetermined data rate or package size selectively either to the data source or to the optical transmitter” (Office Action, page 2). In response thereto, claim 1 has been canceled and new claim 9 presented. New claim 9 is believed to address the Examiner’s concerns. In addition, the Office Action alleges that the controller feature of claim 1

is set forth in “means” language. However, Applicants note that the controller of present claim 9 is not described in means language. Therefore, the cited Federal Circuit decisions pertaining to complete disclosure of structure and materials specific to the “means” elements no longer apply.

In present claim 9, what is described in an evaluation means comprising a micro controller and memory. The evaluation means measures a value corresponding to an operating characteristic of a transmission path between the transmitter and receiver. Support for present claim 9 including an evaluation means, micro controller, memory, and full functionality thereof is set forth in the present specification, e.g., page 4, lines 4-6; page 5, lines 1-2; page 6, lines 1-28; page 7, lines 1-5. In addition to the evaluation means, claim 9 includes a controller which defines structure and functionality. The claimed controller is coupled to a data source for receiving the value from the micro controller and modifying the data rate or data package size depending on whether the value differs from a desired value. Support is set forth in the present specification, e.g., page 3, lines 27-30; page 5, lines 18-20.

As supported in the specification, what is described is a controller 7 that works in conjunction with a source 1 or transmitter 2 (Specification -- pg. 3, lines 26-31). A means or evaluation means “can be provided for measuring the transmission characteristics” of waveguide 3 (Specification -- pg. 5, lines 1-2). The evaluation thereby “detects incorrectly transmitted data” (Specification -- pg. 6, lines 3-4). The evaluation means 8 thereby detects data transmitted in waveguide 3 and “signals this to the controller [7] which thereupon reissues the data” (Specification -- pg. 6, lines 4-5).

The micro controller 10 and associated memory 12 hereof can be used for “storing particular events such as errors, or also an exceeding of limiting values” (Specification -- pg. 6, lines 19-21). The micro controller can be connected to a display for displaying “certain operating conditions or operating parameters” (Specification -- pg. 6, lines 23-24). The controller thereby functions as a “desired-value setting-means . . . for setting the desired value and optionally adapting the setting of the desired value dynamically during operation of the device according to characteristics of the transmission path, such as . . . the transmission quality, bit error rate, and signal-to-noise differences, or simply on the basis of the position of the two

traveling units relative to each other” (Specification -- pg. 5, lines 18-24). Thus, transmission errors, signal-to-noise differences, bit error rates, etc. can be either be displayed or automatically sent to the controller as “values” (Specification -- pg. 6, lines 25-26). Depending on what is displayed or how the values are sent, either an operator can manually adjust controller 7 output, or the controller receives the value or the differences between the value and a desired value. Those differences or the manual adjustment by an operator can be registered on the controller which then makes the appropriate “controlling” adjustment of the data rate or data package size output from the optical transmitter 2, for example (Specification -- Fig. 1).

The value setting means can set the desired value and optionally adapt setting of the desired value to, for example, the output of the evaluation means or what is presented on the micro controller display (Specification -- pg. 5, lines 18-19). Accordingly, an evaluation means or display takes readings of transmission characteristics across waveguide 3, provides input to a controller that has a value setting means for dynamically setting a signal therefrom to that of a target value or “desired value” (Specification -- pg. 4, lines 1-2). The value setting means can be an encoding means, for example, and the desired value can be a target transmission quality, bit error rate, signal-to-noise difference, etc. (Specification -- pg. 5, lines 20-22).

Depending on where the units (i.e., source 1 and sink 6) are relative to each other and the overall integrity of the waveguide 3, the transmission value or characteristic can vary. Regardless, a targeted value or desired value is deemed desirable by taking readings on the evaluation means and providing that outcome to controller 7. Controller 7 can then adjust using, for example, feedback to set a desired value output based on feeding that desired value selectively to either data source 1 or transmitter 2. There are multiple ways in which to set the desired value such as, for example, fuzzy controllers, microcontrollers, or dedicated circuitry that responds to the output of an evaluation means that can simply be a comparator which compares the outcome from waveguide 3 via micro controller 10 to a reference value (Specification -- pg. 7, lines 2-5).

Certainly a skilled artisan need not apply undue experimentation when following the directives of the present specification. Accordingly, Applicants assert that present claim 9 complies with the enablement requirement in that the specification does disclose structures, logic, micro controller, control mechanisms, and feedback for setting a desired value outcome from a controller based on readings taken from an evaluation means or presented on a display screen.

With regard to claim 2, the Office Action asserts that the “specification does not disclose or teach how does the controller convert the data to a predetermined ‘data rate’ or ‘package size’” (Office Action, page 2). In response thereto, claim 2 has been canceled and new claim 10 presented. New claim 10 is believed to address the Examiner’s concerns. In addition, Applicants assert that the present specification does disclose to a skilled artisan without undue experimentation how a controller can change the data rate or package size of data transmitted across waveguide 3 based on readings taken from evaluation means 8 or presented on a display. For example, a skilled artisan would certainly know that clock rates can be changed and the package size or size of bit groupings (or packets) can change depending on readings taken from means 8 and presented to controller 7, which regulates or modulates based on those readings. Certainly, as demonstrated by the references cited herein, modulation is a well known technique, except modulation in this case is controlled through the outcome from evaluation means 8 or through a user input to controller logic hardware or software programmed on a microprocessor or microcomputer. The Office Action alleges that the term “data” is not analogous to “data rate.” Applicants agree. Applicants also agree that present claim 10 (previous claim 2) describes modifying a data rate and is consistent throughout. Moreover, Applicants assert that claim 10 does not convert “data” as stated on page 11 of the Office Action, but instead the claimed controller modifies a data package size. Thus, claim 10 specifically discloses modifying a data rate or data package size and does not perform the functions or features described on page 11 of the Office Action.

With regard to claim 3, the Office Action asserts that the “specification does not clearly disclose any structure of the claimed ‘means for issuing stored data at different data rates to the transmitter’” (Office Action, page 3). In response thereto, claim 3 has been canceled and new

claim 11 presented. New claim 11 is believed to address the Examiner's concerns. New claim 11 describes a controller that stores data and transmits the stored data at varying data rates to transmitter 2 (Specification -- Fig. 1). The Office Action alleges that the ability of a controller to change data rates or, specifically, to transmit or send stored data at varying data rates to a transmitter is not supported by "objective factual evidence" (Office Action, page 12) Applicants disagree. First, Applicants can find no requirement that the general guidelines for examination under 35 U.S.C. § 112 is whether a claim fulfills "objection factual evidence." However, if such is needed, one need only look at the references that are presently cited. In fact, a skilled artisan would do so and would discover that U.S. Patent No. 4,651,316 to Kocan et al. (hereinafter "Kocan") describes FIFO buffers which temporarily store data, and transmit circuitry within transceivers for sending the stored data (Kocan -- col. 9, lines 47-50; Fig. 1).

With regard to claim 4, the Office Action asserts that the "specification does not teach or disclose any 'structures or materials' which corresponds to the claimed means" (Office Action, page 3). In response thereto, claim 4 has been canceled and new claim 12 presented. New claim 12 is believed to address the Examiner's concerns. The setpoint device is disclosed to a skilled artisan as any hardware or software, fuzzy logic, circuitry, or microcontroller that receives an input from, for example, a user or evaluation means 8 and thereby provides a corresponding output for setting a value of that output to a desired amount or value. The desired value can be nothing more than, for example, a regulated feedback value set by the comparison between the signal strength or bit rate within waveguide 3 and a reference signal strength or bit rate to which means 8 makes the comparison, and adjusts its output to controller 7 accordingly. The desired value can be the value of the reference value, for example. Alternatively, the desired value can be a value stored in memory 12 of a micro controller 10 or a bias/reference value placed on the input to circuitry of controller 7. All of the various alternatives are not only described in the present specification, but would certainly be known to one skilled in the art as to the general technical nature of what is needed to enable such a person when reviewing the present specification. Therefore, Applicants respectfully disagree with the assertions made in the Office Action that the specification does not provide adequate description in full, clear, and concise terms to fulfill the enablement requirement. Moreover, the objectionable "means for" language is no longer present in new claim 12.

With regard to claims 5 and 8, it is clear throughout the present specification what is meant by evaluation means and, in fact, evaluation means 8 is set forth in the drawings as well as the written text of the specification. However, to expedite prosecution, claims 5 and 8 have been canceled and new claims 13 and 16 presented, respectively. Present claims 13 and 16 are believed to address the Examiner's concerns. Moreover, with respect to previous claim 8 (present claim 16), forming a desired value of a data rate or data package size is readily apparent to a skilled artisan for the reasons discussed above. Applicants agree with the recitations of law set forth on page 13 of the Office Action. Specifically, the Federal Circuit voiced the appropriate standard in *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988) which reversed the PTO's determination that a claim did not satisfy the enablement requirement. The Federal Circuit stated that since, as in this case, the level of one of ordinary skill is quite high, many of the methods needed to practice the invention would be well known, and "it would not require undue experimentation to obtain antibodies needed to practice the claimed invention in *Wands*." Applicants need not provide, as stated on page 14 of the Office Action, "objective factual evidence" on the level of ordinary skill in the art. As noted in MPEP 2164.04, the burden is on the Examiner for giving specific reasons "to doubt the objective truth of the statements contained . . . in the specification." See *In re Wright*, 999 F.2d (Fed. Cir. 1993). The Federal Circuit in *Wright* specifically required the Examiner to provide explanation as to why the scope of protection provided in the claims was not adequately enabled by the disclosure, and the Examiner was also specifically required to give reasons for the uncertainty of enablement and define why the level of skill is at a particular level that would render a skilled artisan unable to make and use the claimed invention without undue experimentation. MPEP 2164.04; 2164.05; 2164.06; *In re Naquin*, 398 F.2d 863 (CCPA 1968). Before Applicant need provide any objective factual evidence in the form of affidavits or otherwise, it is incumbent upon the Examiner to establish specific and explicit reasons why a skilled artisan could not supply the information without undue experimentation, and such reasons are hereby lacking in the Office Action.

For at least the reasons stated above, Applicants believe present claims 9-16 fully comply with the enablement requirement of 35 U.S.C. § 112, first paragraph. Accordingly, Applicants respectfully request removal of this rejection.

Section 112, Second Paragraph, Rejection

Claims 1-7 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully disagree as set forth below. The requirement of the first and second paragraphs of 35 U.S.C. 112 are separate and distinct. The mere fact that a claim is rejected for a faulty written description or non-enabling disclosure does not render that claim indefinite under 35 U.S.C. § 112, second paragraph. Instead, a rejection for indefiniteness must be based on the claim not particularly pointing out and distinctly claiming the invention. MPEP 2173. Claim breadth is not indefiniteness, however. MPEP 2173.04; *In Re Miller*, 441 F.2d 689 (CCPA 1971). Applicants note that while claims 1-7 were rejected, only claims 1-3 were described with any specificity in the Office Action.

With regard to claim 1, a rejection was lodged against the terms “controller signaling, by means of a desired value, a predetermined data rate or package size . . .” In response thereto, claim 1 has been canceled and new claim 9 presented. Present claim 9 is believed to address the concerns expressed the Examiner. Claim 9 describes a controller coupled to a data source for receiving a value from an evaluation means. Applicants believe present claim 9 connotes standard and customary meanings as to a predetermined value or reference value, well known to a skilled artisan when reviewing the present specification. The value sent from the evaluation means is compared to the desired value and, depending on the difference, the controller performs its modification on the data rate or data package size. *See, e.g.*, the present specification, page 5, lines 18-24). Thus, the controller controls the data stream output from the transmitter so that the data stream is placed at a desired value, and that the value can be either the data rate or the package size.

With regard to claim 2, the Office Action states “it is not clear what it means by ‘converting the data of the data source in accordance with a desired value to a predetermined data rate or to packages of predetermined package size’” (Office Action page 4). In response thereto, claim 2 has been canceled and new claim 10 presented. New claim 10 is believed to address the Examiner’s concerns. The desired value can be a desired data rate or package size. It is well known to a skilled artisan that a package size is a group of bits, for example, placed

into a package, packet, or frame. That package is also sometimes referred to as a payload. Surrounding the payload is a header and a trailer. The size of the payload or package is controlled by the controller, and optimally placed at a desired value of a predetermined package size.

With regard to claim 3, the Office Action states “it is not clear what it means by ‘issuing stored data at different data rates’” (Office Action, page 4). In response thereto, claim 3 has been canceled and new claim 11 presented. New claim 11 is believed to address the Examiner’s concerns. Present claim 11 describes that the controller is configured for storing data, and also for transmitting the stored data at varying data rates to the transmitter. The transmitter simply transmits the varying data rates it receives from the controller.

For at least the reasons stated above, Applicants believe present claims 9-15 fully comply the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, Applicants respectfully request removal of this rejection.

Section 103 Rejection

Claims 1-6 and 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,535,033 to Guempelein et al. (hereinafter “Guempelein”) in view of U.S. Patent No. 4,651,316 to Kocan et al. (hereinafter “Kocan”). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Guempelein, Kocan, and U.S. Patent No. 5,659,368 to Landis (hereinafter “Landis”). Applicants note that claims 1-8 have been canceled in favor of new claims 9-16. However, Applicants will address the rejections as they pertain to the currently pending claims. In response to the recent U.S. Supreme Court decision in *KSR Int’l Co. v. Teleflex, Inc.* (U.S. 2007), new guidelines were set forth for examining obviousness under 35 U.S.C. § 103. The U.S. Supreme Court reaffirmed the *Graham* factors and, while not totally rejected the “teachings, suggestion, or motivation” test, the Court appears to now require higher scrutiny on the part of the U.S. Patent & Trademark Office. In accordance with the recently submitted guidelines, it is “now necessary to identify the reason” why a person of ordinary skill in the art would have combined the prior art elements in the manner presently claimed.

Moreover, even if combined, the *Graham* factors require that a determination of the differences between the combined prior art and the claims at issue is needed. Using these standards, Applicants contend that the Office Action fails to identify the reasons for combining the cited references and, even if combined, fails to note substantial differences between the combined references and the claims at issue. Some distinctive features of the presently pending claims are set forth in more detail below.

There are no reasons identified as to why a skilled artisan would have combined Guempelein and Kocan to arrive at a micro controller and memory for measuring a value corresponding to an operating characteristic of a transmission path between a transmitter and receiver. Claim 9 explicitly requires an evaluation means that comprises a micro controller and memory. The evaluation means is coupled to a receiver and measures a value of a transmission path characteristic.

Contrary to claim 9, Guempelein does not describe any such evaluation means, and certainly not a micro controller and memory for measuring a transmission path characteristic value. The shortcomings of Guempelein are compounded in Kocan. Like Guempelein, Kocan makes no mention of any mechanism whatsoever for measuring a value corresponding to an operating characteristic of a transmission path. Accordingly, Applicants believe independent claim 9 is patentably distinct over the combination of Guempelein and Kocan.

There are no reasons identified as to why a skilled artisan would have combined Guempelein and Kocan to arrive at a controller to receive the value from the micro controller and to modify a data rate or package size depending on whether the value differs from a desired value. In addition to reciting an evaluation means, present claim 9 also recites a controller. The controller receives a value from the micro controller associated with the evaluation means. The controller specifically is used to modify the data rate or data package size depending on whether the value differs from a desired value.

As noted on page 5 of the Office Action, Guempelein does not disclose the present controller and, contrary to the assertions made on page 6 of the Office Action, a data transmission controller (as claimed) is not well known in the art. While Kocan describes a controller, such as DTC 150, 151, and 152, the controller of Kocan does not receive a value from a micro controller, that value being a transmission path characteristic, nor does Kocan make any mention of its controller modifying the data rate or data package size depending on differences between a measured value and a desired value, as presently claimed. Again, Applicants believe independent claim 9 is patentably distinct over the combination of Guempelein and Kocan.

There are no reasons identified as to why a skilled artisan would have combined Guempelein and Kocan to arrive at a measuring device for measuring a value corresponding to an operating characteristic of the optical waveguide, a micro controller for receiving and storing the measured value, and a controller for receiving the stored value and for modifying the data rate or data package size sent from the optical transmitter, and corresponding methods thereof. Present claims 10 and 16 recite each of the various components and steps of a measuring device and a controller for establishing a data rate or size of data packages, depending on a comparison between the measured value and a desired value.

The Office Action concedes the shortcomings Guempelein. In addition, nowhere in the Office Action is it alleged that Kocan can receive a value and control the data stream based on the comparison between the received value and the desired value, as presently claimed. Therefore, it would not have been obvious to a skilled artisan to implement the claimed feature since such features are not disclosed, suggested, or in any way taught by Guempelein, Kocan, or the combination thereof. Accordingly, Applicants believe independent claims 10 and 16 are patentably distinct over the combination of Guempelein and Kocan.

For at least the reasons stated above, Applicants assert that independent claims 9, 10, and 16 are patentably distinct over the cited art. In addition, dependent claims 11-15 are asserted to be patentably distinct for at least the same reasons as their respective base claim. Accordingly, Applicants respectfully request removal of this rejection.

CONCLUSION

The present amendment and response is believed to be a complete response to the issues raised in the Office Action mailed December 14, 2006. In view of the remarks herein, Applicants assert that pending claims 9-16 are in condition for allowance. If the Examiner has any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Daffer McDaniel, LLP Deposit Account No. 50-3268.

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